

Product
Spotlight
Stand-alone emprocessors may
be the poor mer
supercomputers



in Depth Information systems, the power in your hands

Fire! A luxury h

A luxury hotel shuts down, but its DP department berely misses a step/16

SECTIONS

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Peripherals/89 Microcomputers, Computer Industry/71



# COMPUTERWORLD

MANAGEY S. 1984

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#### MEN

Computers in 18 cities will able to communicate at his speeds over the mose lines to for telephone calls by the and of the computer of the com

rear, AT&T announced. Page 2.

Implementation went peach
for the first near of the Peachpak |
sicro-to-mainframe link. And th

system is also pleased. Page 4.

IBM has put its stamp of a proval on another vendor's decision.

Franklis Computer Corp. ger up the fight last week and settle its less battle with Arale Compo

er, Inc. Page 6.

A lot of people on and off Capital Hill are unbappy about a prorocal to expand the PNI's electronic

posal to expand the PBFs electronic surveillance of people who have not been convicted of crimes. Page 6. It was not the first time — it

mastermind behind a plot to smug gle a U.S.-made computer system into the Soviet Union had reported by received shipments of "critics technology" equipment. Page 16.

ages to use those "typewritertelevisions" you put on their dealed? A consultant gives his saggestions in Computerworld's new Microcomputers section. Page 66.



ingo before fing-raising commentes at notional headquarters in Booking Milgs, R.J.

#### AT&T discounts CPE for users

Phil Hirosh

WASHINGTON, D.C. — AT&T last weel began selling its entire base of installed ter minule to its users at discounts of 10% to 20%. Beginning March 1, a company spokes man said, the discounted prions will be re-

riced of 15 months.

ATAT customers interested in buying to mean our a mean for a mean of a mean

back later with a final price.

This procedure applies to systems contailing 10 or fewer stations, the spokesman epialned. A customer with 11 or more station should call his marksting branch office. T

telephone numbers of the Business Service and Sales Center and the marketing office are on the customer's sponthly bill. Asked for samples of the discounted prices for customer premises equipment, the APRIL of the Sales Services and the Sales Services.

station Consley 416 terminate are being at ferred for 91,469.05, 10% less than the pric of the state equipment new. Two-line, its station Consley 416s were reduced 10% (6 \$2,365 from \$2,650); the six-line, 10-station Consley 718 was reduced 15% and new cost 33,792 instanted of \$4,661.

The opposement moter that these prices are approximate. He emphasized that the discounted sales price of a particular termina will vary widely, depending on such factor as its age and complexity. A formula has been deriused for relating the terminal's age to it sales price, but the epokesman declined is

FY

#### Why Computerworld looks different this week

What's different about Computerson his week?

Everything you've found in Computer, world in the past is still in the same place. The latest news is still right up front, and product news is still right up front, and citons. The in Depth section remains is to convenient place, the octor of Computersorids, and continues to provide longer, range of topics. The editorial section of Computerworld still follows the news to tion, giving our readers a forum for their

But a lot is different, too. We've mad the wealth of information in Computer world easier to access. Because or readers' jobs require them to absorb mor information than ever before, we've adde indexes throughout Computerworld. I help them find that information. We'll is using informational graphics — characteristics.

The typeface of Computersorid is difforest this week, too, it's a classic newspa-

per typeface, designed for readability.
And to help our readers do their jol
evan batter, we've expanded our technic
sections with columns by experts in speci ic fields and by users who have imple
mented workable solutions to their comp

Something else is new, too — we've added a technical section on intercoonages or care and a section on intercoonages or care on microcomputers in corporate or vironments that Computerworld has be providing for the past year, the new section will be develored in sindle-sear and entitle with the computer will be settled with the computer will be settled with the section will be develored in sindle-sear and section will be set to be develored in sindle-sear and section will be detected in sindle-sear and section will be dete

Because of the merging of office automation into the mainstream of data precessing, the news custained in the forms: Office automation section has been folder into the other technical sections. If you'r looking for information on electronic mai outware, for example, you'll find it in the Boftware and Services section; local-area networks are now covered in the Comme The move to a new look for Computer storid actually began more than a yea ago, when our editors began to meet wit groups of readers around the nation. After discussing the derivent state of the DF or ecutive's profession and the time presume for faces on the job every day, these needers asked us to continue giving them and the nation of the continue giving them all the news makes have been derived them. In

to make it questes an monor of pe. de. Comparisoner's updated look in it recovered to the control of the lead to be leaded to the second of the foreign newspaper dangers in the U.S. His or newspaper dangers in the U.S. His or the control of the foreign country of the control of the control

made up of members of the Compute sorid editorial and production staffs. The updating of Computerworld reprsents our commitment to serve or

sents our commitment to serve or readers' needs as they change. We this

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#### AT&T plans high-speed data on voice lines

Dy Am Destine

MURRAY HILL, N.J. — Computers will be able to communicate at high speeds over the same lines used for telephone calls when AT&T's Circuit Switched Digital Capability (CSDC) is implemented in more than 13 cities by the end of this year, the company

announced recently.

Calling it a "giant step" toward
the totally integrated networks often
referred to an integrated networks often
gital networks (ISDN), the newly deregulated ATAT end GESC will allow
companies to send nearly all batiness
communications over conventional
phone lines. This data includes voice,

"We're definitely moving toward an ISDN with this," an AT&T spokes SDC will allow users to alternate etween analog voice calls and digial abutton. Speeds of 56K bit/sec rill be achieved for data, AT&T latened

The system is now undergoing a trial at the New Jersey Bell switching center here. Initially, the capabilities of CSDC as a high-speed computer

connection and as a bulk data carrier
will be tested.
Local telephone companies will in
stall the CSDC equipment, which car
be interconnected by lons-distance

stall the CSDC equipment, which can be interconnected by long-distance networks of various interexchange carriers.

carriers.
In addition to bulk data transfer, CSDC's 56K bit/sec digital transmission speed will also allow for telecon-

ste page.

gi- CSDC consists of a software pac
ch age for the Western Electric LAE

age for the Western Electric IAE
switching system, additional har
ware for the switch, modifications
the local telephone lines and some a
ditional equipment at the custom
site.

reliching from voice to dat

to use the network, customers disthe service with a free-digit, then dial the site where the semission is being sent. Once a call stabilated, the connection can be rasted between voice and data emission, AT&T said. Then a customer sends data from mer's site and the central telephonics.

CSDC allows simultaneous, to

CSDC allows simultaneous, tw way traffic by alternating the eigha going in each direction and sendithem at high speeds. To accomplistion to the eight speeds to accomis used to send and receive alternatly bursts of data. Multiplexers are in stalled at both the telephone offiand the customer's premises, accor-

ing to AT&T.

Rather than send signals in both directions at 66% hit/sec, the multiplocers send aiguals at double that rate, but alternate between sending and receiving more than 700 times per second. According to AT&T, this process make it appear to the sent that data is moving in both differential to the control of the control of

CPE tom

disclose it.

Askad whether a customer could request AT&T to visit his site and exsmine his customer premises equipment before pricing it. the spokesman said some site visits will 
'undoubtedy' be made, but the 
AT&T representative will decide

lessing their present equipment can do so for the next two years at specified ruses. Until next March I. according to the applements, 1960 of the properties of the special date, the mouthly fee will be based on a "mailtonal lease rate," separately calculated for each product category. The mailtonal lease rate is equal to either 70% of the highest state-tarfifed charge in effect at the end of

dian of all state-tariffed rates in effect at the end of 1085 for that product line, whichever is higher. If a customer has been paying less than the national lease rate, his monthly charge after March. I will be increased in stages over the following two years until it reaches the national level.

rate March 1

Customers who have been putjin more than the national lease rate will begin paying the new rate March 1. The selling and leasting of AT&T embedded terminal base is administered by AT&T information Systems. the telephone company is deregalated by the selling of the selling and the selling and service centers were transferred from the errabulish Belli operating ompanies to the sub-Bill operating companies to the sub-Bill ope

Prior to last week, AT&T had as it would offer only about 79% of i embedded terminal base for sale the year. Under the terms of a plan proceed to the Pederal Communication Commission early less year, the company could have waited until Jan. 1995 to announce prices for the maining 35% — which included poular models of electronic private prace exchanges, key telephone

modems and data terminals.
This scheme would have been hard on users because, without knowing what it would cost to buy their installed equipment, the user could not accurately determin whether to replace or retain the equipment.

Last November, bourver, the PCC

equipment.
Last November, however, the FCC ruled that AT&T, after poeting a sales price for a particular type of embedded terminal equipment, would have to lease it for two years at the national lease rate.

Bug causes broadcast of nuke alarm

-

manuscipilitation of a compute ised emergency warning system: Pennsylvania Baergency Management Agency (Pena) headquarte here last week set off a nuclear a tack warning that was broadcast police and Civil Defense (CD) a thorities in all of the states 42 rous.

ties.
At 11:15 a.m on Wednesday, the following message came over the typewriters in police radio rooms an CD headquarters: This is on attocurating. Supplemental informationally in the standard water markets.

Authorities in Lehigh Coumoved quickly, transmitting the me sage of imminent attack to emerge or personnel and sounding fire sirve throughout the district. But Lehigh warning all the way to the public, a cording to Pema Press Secreta John Comery, Within five minutes the nuclear attack alert, officials in the other counties received notice

The faulty warning was the result of a botched transfer between floop disks of "canned" emergency me sages during the installation of a net computertact ATAT emergency to the power of the property and "8 mehow, the message was transmitter rather than duplicated," Comey said. "For reasons unknown as of now, the measure transmitter than duplicated," Comey said. "For reasons unknown as of now, the meloas, stated members, the said.

in-line with the new system."

In system, scheduled to be fully
m-line at the end of last week, will be
sart of the nationwide Emergency
Warning System. Consey said that the
suches alert message was caught be
one the statewide Emergency Broad
sat System could be activated.

ast System could be activated.

In Allegheny County, according to lite inspector Leonard Jackson, o cicals had begun to notify emergence erronnel when the disregard notice through.

#### Nata raps Mountain Bell's Centrex offer

y Phil Hitech

WASHINGTON, D.C. — Mount Bell Telephone Co. was accused week of flouting the Federal Comnications Commission's Second C puter Inquiry decision.

North American Telecommunciation Association (Naza), whose member noised independent manufacturer of private Branch exchange equip ment that competes directly with lentrex.

arous compute goot succes to the March, when Naza complained the Hountain Bell; along with other Bell command the March and Bell; along with other Bell command with the March and Service Centrex equipment of the March and Marc

The association has been trying persuade the commission to issurating that "Centrex service may be expanded to provide enhanservice."

troversy is the International Comm

ications Association (ICA), a major communications users group.

The heart of Nata's netition is that

The heart of Nata's petition in the Computer Decision II bars any addition to network-provided Centres 1980, when the decision was adopted, ICA told the commission last month. "Centres service is a significant revenue source for local tole-phone companies," ICA said, adding that if the Nata proposal to freeze enhancement of Centres were granted.

isting Centrex customers cannot be overemphasized. Moreover there is simply no way companies could have effective communication systems if the relief Nata requests is stranted.

verny began lant week, when Nat and other interested parties submit ted "reply commenta" to the PC covering issues raised in earlier fi ings. According to Nats, Mountai Beil is offering "Centron 300" sevice on a tariffed basis in Colorad and on an untariffed basis in Usal Nats routends that Centron is an ex-

or hanced Centrex service that include automatic route selection, multileve at facilities restriction and automati

overflow to dial-up facilities.
The association's filing includes
Sept. 23, 1883, ieter from a Mou
tain Beil official, Paul B. Dorius, i
the Utah Public Service Commission
which soid. "Is a Monrain Beil's
which soid." It is Monrain Beil's
competitive with the offering
competitive with the offering
vendors, there is no legal or publi
policy basis for requiring that Mou
tain Beil's Centron offering be to
iffed."

— that Centron is a "baste" servias that term is defined in the commsion's Computer Decision II.

"At a minimum," Nata told ticommission last week, "Mountsbell's inconsistent representation indicate ... considerable uncotasiny regarding ... the parameter of the Computer [Decision] II asparameter of Control The association

ainty regarding ... the parameter of the Computer [Decision] II as pertains to Centrex." The association added that this same uncertainty u derities the enhanced Centrex offerings of other telephone companies.

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TECHNOLOGIES

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#### Firm makes 'Ideal' choice after PL/I



ON Staff
WESTWOOD,
Mass. — The
W. Paxon Co.,
Sbrary seria
management.
firm base

of on flourishing in a mariest that is been a graveyard for many commiss. While more than 80% of its impetitors have failed over the sars, Paxon has achieved \$200 milms in answal sales, with a steady (35 crowth rate.)

The company attributes much of at success to keeping up with the chanological Joneses. Paxon initialled its first computer in 1963, on with most of its library services limit, the company rune 290,000 mesections daily no its IBM 3081 coded I maniferance.

Model D mainframe. Parm acts as an intermediary between publishers and subscribers most of which are academic and business libraries. Some of its more than 25,000 citents subscribe to 100,000 publications. Among the service Parson offers are subscription management, on-line serials check-inches on undelivered copies, unforties that the control of th

core. Company expansion and the dra matte growth of the publishing in matter growth of the publishing in matter and the contraction of the concellar advantages to PL/I for its programming work. Following, a verbastion that included Cultim Software, juc's 10187 data have made application development. Inciding Passes and the contraction of the contraction application development incident application development incident application development incident application development. Incident application development incident application development incident application development. Incident application development incident application development. Incident application development. Incident application development. Incident application development. Incident application development.

Datadictionary.
Although ideal is oriented towar
programmers, its first user at Paro
was an analyst with no programmin
experience. "I found that once yo
have detailed specs, the ideal prod
ucts lend themselves well to transla
tion to the actual set of code," asi
Jeff Phillips, a section head in the

Working with user David Brown, m electronic publishing consultant, Phillips coded the entire instruction set for a new "electronic yellow pages" service. Called Infosery, the on-line, menu-driven service allows librariane to search for new serial sources by various keywords and topics end to request more information on subserptions.

Infoserv "had an initial estimated in months of programming time with two to three people," Phillips and Browcoded the application in a little mothan a month.

than a month.

Spreen painting and file definition were particularly simple, Phillips said. "We never had a screen written out or a format document."

Cortico by F. China by F. Chin

Ideal is now being exercised on a more intensive project. The Horizon project is a "manusoth order processing program for the Amsterdam, nanager of advanced systems design, and the state of the systems design of the systems design of advanced systems design of activities for worldwide subscriptions that come from its Netherizands of office.

come from its Nectraines office.

Faxon is devoting aim full-time
DP employees to the nine-month projcet. The goal is to write the program
without using a single line of PL/I or
assembler code. So far, Exon said,
that goal is within reach.

Exon noted that Paxon will

ing Ideal, Dataporry and Datareporter instead of PL/I programs. Allowing for reports that users can write themselves and programs not needed by the Amsterdam office, he cetimated that 100,000 lines of Ideal code will be needed to provide roughby the same functions as two million

lines of FL/L.

Because the final project will
probably include 200 or most
creens, ledes's ability to prototype
has been a lifesaver, Exon said. "The
user doesn't have the patience to
read 150 pages of specs," he said.
"Ideal is wonderful for producing
panels very fast. This project would
be extremely difficult to create with-

Eron called idea's full acreen editor and complisation speeds "very fast" and praised the software's ability to execute several commands on a zereen simultaneously. "You can change a country code and then immediately back out to the menu and go to another panel, all in the same

The product also allows Faxon to de concurrent batch processing and real-time updating of Datacom/DB indexes, he said. However, Ekon admitted that

quate, and Idea's [procedure define] tion language] in some cases vertous for the sake of darity." Another shortcoming of Ideal, a cording to Ruon, is its lack of an it to write your own exhibit state ments, and when you debug you've to go back and recompile and relin The perfect solution would be a laguage you can run in Interpretit mode. for interactive debuggin

## Fledgling info center goes up with 'Peachpak II'



By Jahn Gollen CW Suff BATON -BOUGE, La. The first us of Manageme Science Am ica. Inc

ive Peachpak II micro-to-mainframink has successfully implementa he software as part of a fledging is formation center, though end use re currently allowed to utilize on he downloading capabilities of the ackage.

meeting in September, Peachpak
was designed to accommodate on its
data base sharing between mai
frames and the IBM Fersonal Coputer. The peachage was said to allo
for the downloading and uploadit
of mainframe files in MSA applic
tions for manipulation on any micr
computer application utilizing Sol
ware Arts, Inc.'s Data Interchan

The first user, Pidelity Mations Bank here, has operated Peschaga an a test environment alone mid-Dobers and in All production modern and the production modern and production modern and programming manager, Fidelity is using the package on iv BM Personal Compilers in it of the Personal Compilers in a product of the Personal Compilers in the Personal Conference and Personal Compiler Corp. In the Personal Conference Co

Smarsán said the decision to ywith the MSA nicro-mainframe lit was a natural outgrowth of the t was a natural outgrowth of the t year outline "their own data." Early 1903, management implemented potes on nicrocomputer soquiation and use and created a literapidate and the said created a literapidate of their control of their literature and software selection throughout the organization. Through the information or most of them IBM Personal Compers, and the first version of Exec

e Peachpak. "We run several MSA applicatio on the mainframe, including human resources, fixed assets, accounts payable and their financial package. Smarada said. "We wanted something to interface with their financial package, and Executive Peachast, which we installed in April 1985, was as exact satch."

merial package, and Executive backage, which we installed a pril 1983, was an exact match." While the original version of the forward resident of the control of the contro

"Users used to have to take infor-"Users used to have to take infornation from a variety of reports and ell into spreadsheets." Bearreld and. "Now they can just download and. "Now they can just download and take directly into the microlated take the second of the lequits a bit of time. Also, that capbility has made them resilies the many additional things they can derive the information available. Peole are producing things that were Pricklib's some are currently on

at the successful and a second as a second as handled on the mainframe level, Smarada sald. "Fou have to utilis the same passwords you would on terminal. We were very concerns about security, but we're finding it be more than adequate." That concern for data security ! one of the factors behind Pidelity decision not to silow any unloading faction not to silow any unloading

users to become familiar with the triveral aspects of the system first Smarada said Fidelity may be to utilize Feechpak II's uploading pablities in the near Future. 'bank also plans to expand the usmicros to its 17 branches and to all users in the Ruman Resources partment to take neivantage of Pee

Second-class sessing and at Francischen, Base, and additional resulting offices, Computerwork (SCO-OIG-BAI) is positively working complex compile framery of learning of learning seed, Merch (F learning, Jeef C learning, Jeff C learning, Jeep C learning, Jeep

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# IBM picks Comshare DSS for Info Center Seen as endorsement of 'System W'



#### Are your backups running into your prime shift?

Incremental Backups can reduce your

#### Franklin settles copyright dispute with Apple

Agrees to pay \$2.5 million, use own operating system

#### MAX' RESOURCE ACCOUNTING, S AHEAD OF THE PACK



mostilion isn't even close. PACS is so good, it's the early resource a
in DEC's" EAS library. Here's why:
- Flexible billing algorithms
User budgeting and port speed accounting
. EZLOG* for true 3-level reporting by account, project and user

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Market .		
OR .	- State	Zip
Phone ( )		

#### Portables on planes under probe

#### 242

# IN-LAWS

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High performance computer without high performance a program like bride without groom—expectation without

You say you just got this brand-new 4300 ? It's got big blue eyes, great price-performance curves and nifty disk drives? Now you're thinking about merrying it to IBM's 5746-SM2 sort program?

Well, don't do it pardner! The groom is definitely too old for the bride Like IBM's other DOS sorts, SM2 is a hangover from an older necession of sorting technology.

There's only one sort around that's really fit for the hand of a glamorous new 4300 computer. And that's the letest release of SymcSort DOS. If a perfect for DOS-VS(E) and its new Fitsed Block Architecture and VSAM type of data. Here's what SymcSort DOS can bring to the imarriage:

BETTER PERFORMANCE. The first release of SyncSort DOS-back in 1978—incorporated many of the breakthroughs we made in OS sorting. Shore then, in numerous releases, which seadily of the amount of resources that go into sorting. The new release carries on that old lamily tradition Compared to SN42 SyncSort uses up to 50% less SPU Time and up to 70% fever SOS.

 BETTER PROGRAMMER PRODUCTIVITY. SyncSort DOS has a host of features to cut the amount of programming time that goes into applications, but can other reduce the amount of time required for simple reports from her programmer days to one programmer day simply by using these features. They can:

- · select relevant records:
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- · reformat records on output;
- · insert character strings:
- · convert numeric data to printable
- characters (including editing);
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 BETTER CUSTOMER SERVICE. We have the smartest Techi Service people in the business and the best and fastest service. About 85% of all requests for service are resolved within 24 hours, Toy us and find out for yourself.

So if you'd like to match that phenomenal new computer with the perfect mate, give us a call Well send over one of our matchmakers to give you a personal demonstration.

Once you've seen SyncSort DOS in action, we don't think it'll be long before you call us with a familiar request: "Play it again, VSAM!"

Syncsort Incorporated 560 Sylvan Ave., Englewood Cliffs, N.J. 07632

#### y Juleo Hirokener

WASHINGTON, D.C. — A proposal to expand the Federal Burean of Investigation's electronic surveillance of neutrininals has fueled congressional efforts to develop legislation remaints the bureau's computerized

criminal records system.
The proposal, now under consideration by the National Crime Information Consider (HCIC) policy adviso panel, would expend the FBI-open of interestate records exchangementwork to include separate files amountainly of criminals. These include from trafficher inside. These include from trafficher inside. These include drug trafficher

errorists, foreage, esponsage agents with members of organized crime. The idea came from the policy loard's planning and evaluation comnities at the board's meeting in Denrel last October. According to Board hairman Fred H. Wysbrandt, the our proposed new files were among

tee. Wynhymadt said the ideas wer put forward in "a brainstorming se sion" on ways to make the NCI more helpful to law enforcement off cers. He said another proposal, so citede information on persons know to be associated with wanted pe soon, was "rejected out of haid" b he hoard as "beyond where the poliy board wanted to go, way beyond." Wynbrandt, who is ausistant divector of the Criminal Information and identification branch within the aliffornia Attorney General's Divition of Law Enforcement, said the ower is mentitive to fears the NCE.

California Attorney General's Division of Law Enforcement, said the board is sensitive to fears the NCIC might become too involved in intelligence-gathering on moncriminals. "We're concerned about privacy, security and individual freedoms," he asserted.

alarmed Captor Hill critics of NGIO operations, who last year immucessluly opposed an PH decision to turn what was originally a record system into a national surveillance system. Last April the Secret Service included on the NGIO system a file to monitor the activities of some 155 persons that the service fears may threaten the president and other protected

#### ecsons.

At the time, Rep. Don Edwards (D-Calif.), chairman of the House Judiciary Subcommittee on Civil and Constitutional Rights, which has jurisdiction over the NGR, insisted the new file was outside existing Fill statutory authority and required

and got the support of the full Judiciary Committee, which was convinced by arguments the file was necessary to protect the precident. Since then, Edwards' automatitee and its Senate counterpart, the Judiciary Subcommittee on Patents,

Copyrights and Trademarks, have been exploring the possibility of legislating guidelines for the system's record quality and for access to the system by non-criminal-justice persons. Congress' Office of Technology. Assessment reported last year that a high level of record errors reduces to the property of the contraction of the NGC Access and the Conference of the NGC Access

the effectiveness of the NGIC. Accus is also a long-standing problem, be cause in some states servone can obtain NGIC records, meaning sensitivand possibly inaccurate data can be disseminated beyond the control of law enforcement authorities. The Edwards' subcommittee plan

The Edwards onboundation plans to hold hearings on the new man to hold hearings on the new man create file proposal in late Polymany or early March. According to a subcommittee staff astorney, the proposal concerns Edwards, who attenting, because the NCIC is authorized to collect, maintain and exchange only criminal data "that is a matter of public record somewhere."

circulated by Individual law available on a public information system is entering and the control of the contro

Staven J. Metalitz, staff director be Senste subcommittee, esté tisnel la aware of the proposal for tisecciaire s'file and will take a close look at it If it progresses beyond the incussion phase. He said the submunittee "would be shoppideal above he proposal] if there is a real dama for turning the mystem into one that.

Surveillance uses of the NGI sch as those proposed in Octobe dit the existing Secret Service River The resistance of the NGI, he as the continue of the NGI, he as the proposed lite, there remains ossiderable work that must be one to the proposed file, there remains the proposed file, there remains the proposed file, there were the proposed file, there were the proposed file, there were the proposed file, there are now considering the new files.

In Engineer of the proposed file proposed on this level, the proposed file proposed on this level, the proposed file.

#### MAKE YOUR VAX DO WINDOWS



SMAPTESTAP is the first VAX information management tool that creates multipwindow applications—and can acrolf your screen to 400 lines. The SMAPTSTA lamby includes: SMAPTDESIGN\* for designing applications without programming

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Stagend Rechtschappe, Inc.

Stagend Rechtschappe, Inc.

Stagend Rechtschappe, Inc.

Stagend Recht Code, Cd 1917 (Stag 192-377) Stadio Staffends and all-low party Stagend

#### NYC computerized tax program collects \$40 million from evaders

NEW YORK — A computerized as program designed to catch up wit individuals and businesses which have evaded city tax payments in resulted in the collection of million of dollars here.

System (Theo), run by New York (City's The Division, has sided in the collection of more than 440 million from over 56,000 persons and firms. By using a system that matches various types of files, the city has been able to detect evaders of commercial rest tax, unpaid business in come tax and delinquent individual taxpapers. We take existing city outsite files and mistch them against our tax files, "explained Umberted out the contract of the

The initial tax project, aimed evaders of commercial rest to brought in approximately \$20 mills alone from over 100,000 businesses. The City Tax Division employs people to run the program and me

per year, according to Dindo. "This initial match—the big one where we also had to create the files, the on time eystem and so on — was costing about 10 cents on the dellar," he said But is the meantains, we've rean the program over and over again, asset we're down to an average of four te five cents on the dellar, which in the clockes software, computer time, por

A spin-off of Thes is to detect as ollow up delinquent tappayers, it hading those who have mover fit starms. "Everything from the initi positionsmire all the way down be warrant is being produced it

The Tacs program and all the assonated activate were developed by he data processing division for the ax department. The tax departmenses two IPL Systems, Inc. 4446 conuters with 446 bytes of memory. "We are constantly developing

#### COMPECTION

"venture Unvein Service merging Payroll, Personnel" (CW, Dec. 12) incorrectly stated the name of one of the vendors involved in the agreement. The service is a joint venture between Chemical Bank and Information Science, Inc.

The correct price of "Composes Security Report" [CW, 2] is \$1,606. It is available from rail Engineering, P.O. Box 2

"Yah Lib' Update Released Pi lid 4300e, Series/36" [CW, Dec. 1: correctly identified the host con sters required by Valu Lib. The pr act runs on IBM 4300 series and 3 reles mainfrance under IBM's MV ed VS1 oversting systems.

of the product from Softleb Byster mentioned in the letter to the edit written by Rebert Gregory (CW, Da 16/Jan. 21.

#### DEC pays \$3.2 million to settle GSA claims

#### Hitachi execs fined \$10,000



#### M/SP Printer Roulette



#### Software aids crackdown on trade in stolen goods

# No other 3270 protocol converter can match all hese features.

#### Array processors gaining appeal | Array processors



#### found prevalent in CAT scanning

#### STAND-ALONE ARRAY PROCESSORS FOR MEDIUM-LARGE SYSTEMS

Vender <sup>1</sup>	Model	Address Spiles (Word Stae)	Compatible Processors	Price*
Analogia, Inc. Authorn Flood Wahallald, Mass. 01880	APROD	7 20	Digital Brudyment Corp. PDP-11	E26,000
Computer Statige and Application, Inc. 377 Siles St. Houston, Mass. 08764		SI-Six Floating Point	DEC POP-11 and UB-11	\$12,000 - \$10,000
Computer Bignal Processing, Im. 40 Linval Circle Billerice, Mass. 01821	Map 200, Map 300 Mbd Map	23-Bit Pleasing Point	DEC PDP-11; Date General Corp. Reve. Entjeen; Goold, Inc. SEL Systems; Reptinen RDS 500, 704; Péres Corregui- or, No. 400, 800; Headen- Postead Co. HP 2100; Harris Corp. Processors DEC PDP-11	822,380 - 806,000
Pleating Public Systems, Inc. P.O. Box 20409 Porturel, One. 67238	AP 1208 AP 1603 PPS-1000 PPS-8000	30-50 Presting Paint 30-50 Presting Point 30-50 Presting Point 30-50 Presting Point 30-50 Presting Point	DEC PDP-11; DG Nave, Robert Goods SIR; Perp- thern PDR; Prive 400, SIC; HP 2100; Harris Matasse- puscy; SIM Matricense; Epo- ry Cop. Matricense; Council Dath Curp. 6000	\$18,000 - \$29,000
Martens, Inc. 11760 Serverio Velley Road Sen Diego, Call. 92121	8000 /	24-lift Floating Point	DEC Colors	84,360
Numeric, Inc. 300 Nacoburn St. Newton, Mass. 00161	442	32-dix Ployling Point	Stand-Hann ,	\$75,000
Styant Processing Systems, Inc. 228 Creasure St. Statistics, Mass. 02154	91	16-8tt Flood Point or Flooting Point	DEC PDP-T1; DG Hove, Eclipse; Medicarp Ministeryputers	888,000 - 888,000
Stey Computers, Inc. Foot of John St. Lovel, Mass. 01852	Biopronik	2000	DEC G-Bus, Intel Multibus	84,000
Ber Yoshnologies, Ive. 1300 Berjanin Frankin Pieza Portand, Ore. 97256	, ET-100	. 20	DEC VAX 11/780	8290,000
State Associates, Inc. 200 Stay Hill Road Walfram, Mass. 02154	ANIO	10-Str Flood Point or Block Flooting Point	DEC POP-11: DE Nove, Ecipus	886,000 - 8180,000

"The Top 10 Array Processor Vandors in Terms of Bales "For a Basic System Configuration



ARRAY from page

ed out. Many users prefer to develo their own software for array process ors, he added.

Canin, however, said that while he amount of pealingal software for rray processors is miniscular whose processors in the said of the said and the said of algothese. User can contend those at the said of the said of algothese. User can contend those at the said of the said of algothese said of algothese. The said of algothese said of algostate said Like the applications is asputers, most application y processors are develop as. Because Portran is

ray processors are developed in Petran. Because Portran is somewhat more difficult than the po-tall "user-friendly" languages availab for file-oriented processors, not everyone is capable of using an arraprocessor.

Percentage of the state of the

on a standard commercial processor.

Array processor users typically
access the unit through a frest-enprocessor, such as a supermini o
mainframe. But Hausman noted som
array processors can accommodate:

Boss array processors can be conigured with their own memory while others share memory with the rost-end processor. Sharing memory with the frost-end processor if it must frequently access information rost frequently access information rost the frost-end processor, Center

ed for array processing, there is be some way to determine which grams should be sent to the ar processor and which should rein a file-oriented system. For a applications, the decision is eeespecially for the sophistizated us that typically use array process But for those cases in which the to is unsure whether the application of the sophistic array.

s unsare whether the application will efficiently support array proceeding. Hausman said, there are precompilers, such as the Vast produces y Pacific Sterra, inc., which hely valuate applications before submission to an array processor.

What makes a firm decide to buy

as array processor? According Laster Gerhards, a computer scient at hierarchier Polytechnic Instituto at hierarchier Polytechnic Instituto at the control of the control of

SCANNING tom page

and making production decisions and for nondestructive testing applications, the report noted.

What does the future hold for the

tions, the report noted.

What does the future hold for the array processor market? According to Business Development Group, decreasing costs for both minicomputers and array processors will make more minicomputer users will.

ing to buy array processors.

In addition, applications such as CAD and computer simulation are becoming more popular. Since both applications require a high degree o computing power, more users of min is and law-less maintainers will fine and law-less maintainers will fine.

slong with their current systems.

The report costs \$1,500 and is available from Business Development Group through P.O. Box 3044, Stanford, Calif. 94305.

THOUSANDS OF SOFTWARE PROGRAMS ARE GATHERING IN NEW ORLEANS.



-1 TTCON EXHIBITORS

#### It was DP business as usual after Boston hotel fire

#### **Attention DEC Mini/Micro Users:**

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#### Stories on networks sought

#### Data base built to help Salvadorans gain asylum

# "We're saving \$50,000 a year by eliminating SYSOUT printouts and installing JCLWTR."



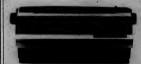
#### FCC rules on marketing satellites, network interfaces

**Attention DEC Mini/Micro Users:** 

Take advantage of the MTI/Racal-Vadic/MICOM connection.



Better letters.





**Dataproducts Daisywheel Printers** 

#### Commerce rapped for licensing fugitive dealer

#### High-tech smuggler still at large and still very much at work



#### Electronic Spread Sheet for VM/CMS & MVS/TSO - Not Just Another CALC -



#### Quality assurance shows top growth in corporate DP

#### Quality assurance success seen linked directly to exec support

**Attention DEC Mini/Micro Users:** MTI is one of Digital's Authorized Distribu



That's why you can always lease or buy the latest DEC terminals and micros from MTL



Rough writer.





**Dataproducts Daisywheel Printers** 

#### Akers to keynote NCC

LAS VBGAS — John F. Alters, president and director of IBM, is acheduled to be the locyaete speaker for the 1984 National Computer Declaration (NOT)

NCC '84 will be held here July 9-12 at the Las Vegas Convention Custer; its thome is "Enhancing Countries"

Alters, elected IEM president and a director in February 1953, joined IEM in 1960 on a sales traines. He is a former group executive of the data processing mariesting group and the information systems and communications group

NCC is sponsored by several soeties and institutions. They inche the American Pederation of Info mation Processing Societies, In (Affps), the Association for Cos

(Affips), the Association for Computing Machinery, the Data Processing Hanagement Association the Institute of Electrical and Electronics Engineers Computer Society and the Society for Computer Stmutter, and the S

ction.

Conference fees are \$100 in adance or \$125 cm-site, according to figs, which is located at 1800 reaton White Drive. Beston, Va.

#### Videotex meet set for April

CEICAGO — The Videotex '84 is ternational Confevence and Exhibit tion, festuring information on maketing, products and technology from the videotex industry, will be lebhere April 16-18 at the Hvatt Re-

here April 16-18 at the Hyatt B gency Hotel.

Sponsored by London On-Lininc, the conference theme is "Wider ing the Sportrum."

ing the Spectrum."

According to the conference organizer, it will feature three simultaneous conference sessions.

Among the sessions will be newly instituted "talk shope" to enable par-

ments specifically genred to their business interests.

"Videotex — The Pull Picture will cover basic supects of the video

tex industry, according to the conference organizer.

"Industry Issues and Developments" will focus on major strategiand technical issues.

ments" will focus on major etrategi and technical issues. "Talking Shop" includes more in formal seasions where dalegates will be able to exchange ideas on a ver

The registration foe is 8606. After Peb. 29, the fee is 8705, the organize said. London On-Line is located of Suite 1190, 2 Peun Plana, New York N. Y. 10121.

#### ROWTH tem page

views per ayotem development projects was one to three when the projects of the projects of the projects of the project out among the combined organisations of the project out among the combined organisations (44.1%), and by 80% of

responding DP organizations.

After the review, reports are mad by only 60% of the overall appendints (60.7% of the responds DP organizations).

OP organizations). let cost-justified In addition, 84% of the survey

spondents do not cost-justify that function to management. Of the re poundents who represented DP or ganisations, 67.9% do not cost-justify their function to management.

The impority of the quality assurance groups report to either the senior DP menager or the menager of DP support/planning. Less then 30% report to the manager of systems and programming and those that do "appeared to be the least effective in presenting quality data processing," the survey resect seid.

quality assurance was found of fourish in organizations using for man design and mentramence met ods. Approximately three-fourths the organizations having quality a surance groups use formal system d velopment life cycle methods, it

were developed in-house.

Moreover, about half the qualiassurance groups use a formal in view process, such as review; check lists, to ensure that quality is built

Most often, survey responds (52.8%), combined a review to with a quality assurance staff in her to conduct these reviews. During the review, over the

During the review, over the ourths of the quality assurance as yets responding use probing, the st ey found.

Approximately one-half use queo onnaires, 20% use checklists and the reported performing part of

Copies of the survey are available for \$25 if payment is included with the order (\$35 invoiced). Copies are distributed to QAI members at most from Quality Assurance Institute, which is located at \$222 Bay Point Drive, Orlando, Ph. \$2510.

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Mile to a replaced resistant of this Cop. PC STRE, PC STCCOP and PC STRC or resistant



Computer Produc

#### AUSTRALIA

#### BRAZIL

RIO DE JANEIRO — The razilian computer firm Co-ra is reportedly facing a ma-c crials with the reeigna-on of its president, Antonio arios De Loyola Reys. With-

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# "Rockwell International eliminates order management paperwork and ships products faster with a **Tandem NonStop**" Computer System."

Our Trudem NorrStop in puter helps us dramatical streamline order tracking for a proad line of productive at the Collins ay onics results in Codar Rapids. This is the single operation has mant we've been able to single products faster as well is respond to distinctive or an able to single or an able to single or an able to single products faster as well is respond to distinctive.

The Tandem system
consolidates all data pertaining
to the orders from order

-- fry to scheduling inventor
-- to packing I sts. and

mont an down the line to ship and And, because the system concline, other departments have immediate access to this information as well accounting for example, new generates invoices auto-marcially, resulting in much improved cash flow. Manufacturing is saving \$175,000 a year in internal freight charges due to the reorganization of ordering and shipping procedures and the Group as a whole has been able to eliminate more than 30,000.

Other system benefits

customer service include better control of backorders more accurate pricing information and the ability to make detailed forecasts of market conditions for planning pur poses. The net result is an operation that is helping us achieve some very significant causes in plant productivity.

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For information on how a Tandem NonStop system can improve your productivity or your P/L statement, call your local sales office or Tandem (Computers incorporated 19333 Vallco Parkway Cuper timo Califorma 95014 U.S.A. Toll Free 800-482-6336 or 408-725-7500 in California

# TANDEM

NonStop Transaction Processing

#### Universal interconnection seen next interchange step

next major advance in tronic data interchange, ording to T.J. O'Rourke, sident of Tymshare, Inc. le was among the speak-here last mouth at the an-i meeting of the Trans-tation Data Coordination unlittee (TDCC), which

ps, maintains and pro-business use of elec-data interchange stan-Tymshare is a major er of on-line, comput-ed communications/in-

rmation services.

applications and required acherence to proprietary stan-dards. Next came "open" systems, which did not require the use of any particular hardware, software or network service but did make adherence to a specific

tems are now be replaced by "dards." which o proprietary commis protocol mand

real Communicaurd (UCS) is one such opandard, O'Rourke said.
He added that open sysems are now beginning to be
by "generic stantififf-

ange traffic.

REPORT son page 19

ing/personal computers. WD 2200 and WD 2700 The WD 2200 and WD 2700 can also be remotely connected to an IBM host computer and emulate IBM 5270 terminals, the version said. The WD 2700 also has image eximing capabilities, along with hard disk and ink jet prister options. The WD 2200 with a thermal printer costs \$4,247, and the WD 2700 is priced at \$7,572 with a printer and \$8,980 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with a sink jet of the WD 2700 is priced at \$7,572 with \$1,000 in \$1,0

MATSUMOTO — Epson orp. and Suwa Seikosha orp. Ltd. have jointly an-sunced Skymirrer SM-10, a icrocomputer designed to



NEW LIFE POR



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exchange information with other computers Work is lost or duplicated. Even triplicated Which drives costs—and information managers
—crazy. This is Computer Shock. Fortunately, Mohawk Data Sciences has the treatment.

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#### MDS MERGES WITH IRM

HERO marries compatibly into IBM net-works. Using the MDS Communications Processor, HERO can talk with IBM mainframe computers. It's engineered to look like IBM 3270 SNA or 3776 remote job-entry systems. And our MDS Super SNA option lets you have both on one communications link. Most IBM

and non-IBM protocols are available, including binary synchronous, asynchronous and X.25 Only MDS offers you INTELLIGENT 3270." It integrates the intelligence of HERO with the intelligence of the host. User-written HERO programs can draw data from the host, process it, update it and return it. Or store it locally.

#### HERO DOES EVERYTHING A PERSONAL COMPUTER DOES.

Since it's engineered to help you make decisions, HERO naturally provides word processing, financial spreadsheats, scheduling, analysis and planning functions. And it can run software under MS-OOS.

HERO is multilinguel. It can understand programs written in FORTRAN, PASCAL and BASIC. As well as existing MOS Series 21° programs written in COBOL and MOBOL IMOhawk Business Oriented Language).

#### HERO HAS BRAINS TO MATCH ITS LOOKS

With HERO's 16-bit processor comes mem ory expandable from 256K to one megabyte, with private disk storage up to 80 megabytes. HERO is small, light and handsome. It fits snudy on the corner of a desk, and has the quiet, impressive good looks which inevitably find their way into the corner office.

Memory and storage modules are textbook size. They tuck away under a desk. With MDS, out of sight is never out of memory.

#### MDS SAVES YOU MONEY IN THE PROCESSING.

The MDS SUPER 21" Communications Processor can cluster as many as 16 HEROS to a shared database. Each workstation shares the same disk drives, tape drives, printers, modems and communications lines.

And you share the savings. SUPER 21 provides two communications ports that operate simultaneously. It can talk to two different mainframes in two different protocols at once.



#### HERO TODAY, HERO TOMORROW.

HERO is designed to grow with your system. The modular sections are made to snap together. So it's a snap for a user to assemble install and renair.

install and repair.
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Twenty years ago, MDS set out to devise programs linking business systems together. Not just office automation—word processors and personal computing. Rather, automation for entire organizations; sophisticated networks linking remote locations together.

Over the years, by listening to our users and by responding to their specific networking needs, we've become acknowledged experts. in automating the organization. By making this responsiveness our number-one priority, MDS has become a multidivisional, multinational networking organization.

working organization.
We'd like to help you do the same. If you want to know more, we suggest two informed

sources: (1) Talk to our customers. (2) Call us at 800-MDS-HERO.

#### MDS HERO WILL MAKE A HERO OUT OF YOU.



#### ICA seminar set for Jan. 15-18 in Fort Lauderdale Theme of meet — integrating the digital office

PORT LAUDERDALE, Fig. —
The International Communications Amociation (ICA)
will hold a suminar on digital
subscommunications behavless transported to Jan. 15-18 at the Fort Laudurishs Marriott Hotel and

The theme of the seminawill be "Integrating the Digi stal Office," focusing on alter natives for merging installer components of office auto mation into a unified system. The meeting will include a serice of intensive sessions exploring a range of issues re-

and its implementation.
According to an IC/
apoleonan, seminar topic
will deal with technical an
management aspects of digit
tal private branch exchange
(PBX), transmission method
to interconnect advanced de

ing local telephone company facilities.

The impact of deregulation will be examined in several sessions dealing with

panies, the spokesman said.
The nation fee for the seminar is \$425 for ICA
members and \$450 for others. More information about
the seminar is available from
ICA headquarters at Saits
225 I.A.S. 12750 Meric



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#### AT&T chief to speak

EW YORK — Charles L. ra, chief executive ofand chairman of AT&T, keynote a seminar here 36-37 on the business, and remistery strate-

in. 26-27 on the business, gal and regulatory stratese of telecommunications suparises.

"The New Telecommunitions Landscape: The Commiss Speak on the World of 184 and Beyond" will be

and at the New York Illito y the Legal Yenes and Law is Bashness, Inc./Rarcous ince. Jovanovich, Pulsiehers. Key essentives fronvariety of tislecommunicaica companies and speaker variety of tislecommunicainancial and consulting or anisations will participate. Begistration, includinmuch and a recopion, it 445 per person (3336 for

Additional information is valiable from Law & Busises/Harcourt Brace Jovanoich, 757 Third Ave., New fork, N.Y. 10017.

#### Telexchange to hold meet

SAN FRANCISCO — The Fourth International Teler change Meeting, scheduled a the Westin St. Francis Hote here Jan. 16-18, will focus or system security, high-resolution computer graphies an inter-ot-mainframe integration using Telefile Compute-

Corp. Sigma systems.

Sponsored by Telichange, the Telefile Compriser Users Group, the confcence will also feats
discussions on performan
monitoring, state-of-thechardware and software

elopment and additions he users group library. There will also be gener usiness meetings and sp

Registration costs \$20 More information is available from Teleschange, 171

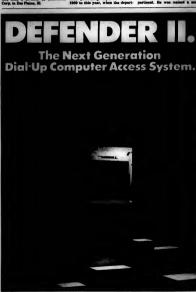
#### Interest bonus proves bogus for bank's customers

#### Meet to cover fiber optics

# It's time the technology of data collection caught up to the technology of data processing.



#### Graphics, CAD/CAM covered by directory





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#### 'Cray Blitz' wins chess trophy

#### Journal covers Fortran's 25th







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here full file transfer is necessary INTERCHANGE/1 provides to PLOAD and a DOWNLOAD utility. UPLOAD can be used to enter treactively from the PC, or to transfer records from a PC file is inframe database. DOWNLOAD will allow transfer of maintraine e PC and will even prompt for MATCH criteria so that only the coords are transferred.

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INTERCHANGE/1 is a true micro to mainframe interface because it treats the microcomputs, as an equal not as a 3270 terminal.

ENTERCHANGE/1 is the first in our CONTINUUM series of produ Distributed Data Processing (DDP). We are committed to supporting

INTERCHANGE/I forms the basis for an integrated distributed res

INTERCHANGE/I currently supports mainframe ADABAS, IDNECTOTIAL and VSAM files and interfaces with the IBM Prescrut Compact. Support of the IBM Prescrut Compact of the IBM Wang and relational "mainframes" (VAK, BURROUGHS, DATAGENERAL) are under development. Call us for details or special requests. If we don't have it now, we will build it for you.

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LARRY E. LONG

tions about how to proceed?

Alloy MIT "security" plans are an are not that management near the process of the process and the process and the process and the process of t

be. Then set a series of strategic ob-jectives.

In the plan, accompany each tra-tar. In the plan, accompany each tra-tar. In the plan, accompany each tra-tar. In the plan transport of the plan tra-tar transport of the plan transport of the man, hardware, personnel, opera-tion, hardware, personnel, opera-tion, hardware, personnel, opera-tion, hardware, personnel, and the plan transport of the plan tra-tar personnel and to emphasis user friendliness and distrib-tion, data processing in systems in a data base environment and to emphasis user friendliness and distrib-tion.

sally, keep it to 20 pages or less

Q I've conducted several in-house training assaions over the last three years on data base management and attructured design. I enjoy teach-ing and would like to know what the career opportunities are in colleges and suiversities. Are there opportun-ties for part-time instructors?

NAROUND TIME time and part-time faculty has be-Now, if time permits, identify the worst programs and list the pro-eramming tricks that they use.

Q I would like to work in Europe or perhaps South America for a few years, while I'm still young and unstituched. I have five years exper-ience as a programmer/analyst. Will I be able to find a job?

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in get the job done quicker, ou can store bit which as much data on indy 2000's two built-in-das drives as us can on IBM PC, COMPRO, or Professional, drives. And you can have indicated the properties of bigger libra; isono our memory, ex-incis to 788,000 bytes. may 2000's video display is truly stun-ing. Qur color graphics have up to whee the resolution of the others, and up to whoe as many colors.

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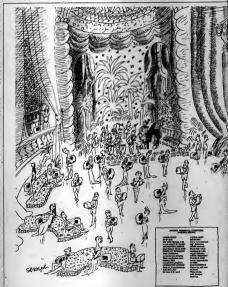
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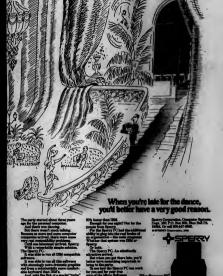


#### Speaker cites next decade's concerns, players





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#### LETTERS TO THE EDITOR

#### Problems not common to all environments

#### Inaccurate picture

## COMPUTERWORLD

## VIEWPOINT

## U.S. computer industry: 1984

mming as we know it today will truly start pear in 1984. With increased usage of ISDN is a certainty, increased investment in their e afferings will occur. These will relieve us need to learn artificial tinges like Cobol to get a computer to do our bidding.

## Some of my best friends are users

## Don't talk down to your users



How many times have you elt unappreciat d for the extenive time and efort you've punto a project? I you hear any

LAHOOD . into a project?
you hear as,
thing from you
ser, it usually revolves around son
roblem. Almost never do you r
sive a thank you. How come?

ceive a thank you. How come?

As computer people, we become quite proficient in the skills of our technology. We tend to be creative and have high initiative and above-

y average intelligence. We demand u lot from ourselves, and our standards are usually pretty high. It is this kinof everyday elitism that also gives u 'a false sense of our importance. Ou it true mission is not to be the creatos if of all good, but to be the facilitates of our users' needs. It is the user

true mission is not to be the creators of all good, but to be the facilitators of our users' needs. It is the users' specific needs that result in the requirement for systems to be developed and for our existence. Without the need to build a system, there is not

lose sight of this. Consider the following:

coming good listeners. The next time you attend a meeting with your users, keep track of the following: How many times do we interrupt the user before they've completed a thought? How many times do we stop listening and stat merally described a notice.

and start mentally developing a solution? How quickly do we start leading the conversation instead of acting as facilitators?

when we develop systems to our wn understanding of the problem, re run the risk that the solution does not meet the user's expectations. Not seeting user expectations guaranE Talk up to users, not down to seen. It tends to be a normal inclinano for Diven to think of themselved smarter than most users. The fact that the user is our boos, and even hem we truly are smarter than our see, we would never finant it. In our cases (if not all), the user knows on about the needs of the organizne, and It is these needs that we can understand to attain the succut understand to attain the suc-

The user's knowledge, therefore, is most important to our success. In the property that the second retake the knowledge are treated respectfully by those who need to at-

Don't promise more than can be delivered.

What's your reaction to an avertisement that suggests a produle a panacea? How do you feel about salesman's claim that "It'll be total transparent?" When building us expectations, be carreful to limit you self to deliverables. If each delive able is on expectation met, then us estisfaction will grow, and mutual?

Those three basic "to do's," when practiced diligently, will earn the systems development professional the recognition and job satisfaction that the extensive time and effort put into each project deserve. Give

them a try.

Measure your recognition before and after, You can always go back to the old ways, But wouldn't it be nice to hear "nice job" just once?

nd communications services of ray, Inc. in Syracuse, N.Y.

NDUSTRY from page 41
ser costs, slower technological
rowth and a lot of hard feelings. I
sy "unwittingly" because most of
setr membership has more to fear
men a handful of domestic competi-

Upt that From againstee imports.
When not fighting the Japanese these same groups will work over the Association of Data Processing Services Organizations, Inc. (Adapos) whose leading sembers are in prepared to opp. Squeezed between the competition of energing value-addee EDM facilities and serviy sempen data processing service organization official banking services from with the contraction of the contractio

tongs winding.
It's hard to imagine that a Martia
landing is high on the list of Near's
resolutions of anyone I know
sithough conditions for a landing at
improved by the close proximate;
Mars to Earth in May 1984. 50 I won
predict the supprise amounteement on
Earth-Mars landing party. But
wouldn't be out affected if it did on
Earth-Mars landing party. But
such that is a far-fetched if it did on
Landing the Martin May 1984. 50 I won
Lanneth in 1987. Whatever, 1984 with
we remembered for the high-stech su

tew Year.

Locht is chairman of Locht Scinces, Inc., a New York-based thin and specializing in computer an analysis to be a school or section.

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## Micro link options growing

#### DBMS for micros called lacking

#### PRIME



#### UFO/Cobol unveiled for CICS, CMS









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UNIVERSITY OF MINNESOTA SCHOOL OF MANAGEMENT PRESENTS SEMINARS FOR THE SYSTEMS ANALYST

PRIME

DBMS from page 43

"There's not a lot of ight about whether prod-have a long life," he The root of the problem one right down to the per-onal computer user, who is enerally ignorant of data

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#### SYSTEMS

ADVANCED STSTEM CONCEPTS, INC. Performance Manufaction Sy

Advanced Systems Corespin, Inc. has assessmed

package for the Digital Spatjament Corp. VAX-11 series of mipormiticonqueters. The Performance Simulation System reportedly allows a user to record one or

harios.

A company spokesmar said the package provides three main facilities; perfect

said the package provide three main facilities: perfor mance testing, application reliability and security.

The protage is said to priving a transport method conjunction of the c

The package is immediate by available for license fee of \$4,905 for the VAX-11 -780, \$3,405 for the VAX-11 750 and \$1,905 for the VAX 11/730.

Advanced Systems Cor cepts, 22 Hudson Place, H bolten, N.J. 07030.

SIGNAL TECHNOLOG

Signal Technology, In has introduced a set of utility programs for Digital Equiment Corp.'s VAX-11 cos

Called Quickstar, the secondate of three interrelated programs. The first component, Quickstat, in used to interactive system status menistering. In reportedly gives managers information on what system resources are being used, and it provides additional selective privalents, the company noted.

Quicktalk, another comp next of the program set, en bies users to communica between terminals. A use can send a message to are other user or connected to minal with a single con-

Quickchange was reportedly designed to allow use to change from one us name to another without is out and logon steps while taining recording of account int massages, changes and checking of pricro-to-mainframe link star is priced at provides for the off-loss

Quickstar is priced at pro-51,700. Signal Technology, 5951 ic to Bucton Boad, Goleto, Calif. A 89117. systematical and approtology.

resolutions in the interest of the IBM Personal C to route batch report line transaction—
interest of the Person puter printer or IBM personal C to provide fullare Systems of the personal C to provide full-

minframe-type speeding fahat clitties such as feward and ing back spacing printers in the press of a forms jam, report class type quessing, report

came type queezing, report
the purging and user report directory displays.

The system reportedly cam
to drive up to three printons simultaneously per Personal
to Computer, and each device
uncan print different reports

Startock Software Spi tome, 3539 Borough Place Woodside, N.Y. 11377.

BUSINESS STOTEMS AS SOCIATES Leserost

Business Systems Associates (BSA) has announced a product that is said to allow users of Howbat-Fuckars Co.'s HP 3000 to utilize Xe rox Corp.'s Xerox 2700 hasso

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The pasting feature Printferm, endbling the operated to copy and to copy the measure of any form on the laser grinds including data and displaA juckage inciencycle, the intetroller and the Xer available for \$30.5 MA, 20046 Ge

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Additional feetures include ringle-sure control, naturate transfer from filed to legeff. The protection, command files, mant terminal made and global comtact the sure of the surtice of the sure of the the felturing equipment to be insurfaced to the sure moclude through standard surial ports: the BHE Fournal Computer XI; the Digital Rupippoter XI; the Digital Rupipeest Corp. Reinborr, VY100, MX-11M, TEX-Plus and ET-

Link is priced at \$500, and the Vis/Chill version made \$1,500. TAP, Suite G, 1540! Budhill Ame., Trebbs, Cubic.

ETUAL MICHOE

Virtual Microgramme, Inc. hus amounted the P-Bridge system, which reportedly allows Digital Resignant Corp. PDP-11 and VAX-11 mincomputers to run software written for Beltach Electorys-

> To accommodate four usn, the product includes four log, Inc. 200 microprocesrs, 256% bytes of randemcom memory and a let-alice sto machine.

The cost of P-Bridge ranges from \$5,000 to \$7,500, depending on the heat CPU, and includes the board, software that allows it to run and a license for the P-creates.

Virtual Microsystems, Suite 720, 2150 Shattuck Ass., Serkeley, Calif. 94704.

DIGITAL CORP.

Digital Equipment Corp.
has announced what the
company terraid "mixed
packages" combining Decaysten-10 and Decaysten-20
computers with VAL-11/780
superminicomputers through

in addition, the company mounced average price renctions of 20% on Decays-

unstativation / VAX packages are connected through Donet to interchange data and files. A typical mainframe/ VAX combination, according to DBC, is a 1078 package consisting of a Decaystem-1001 mainframe and a VAX-11/780 superminicosputer with associated hardware and peripherais. This package is wised from \$400 500.

DBC said price reductions of mainframe packages and associated software are effective immediately.

nord, Mass. 01754.

DATAMETRICS STRUCKS CORP. Terch/10

Detametrics Systems Corp. has announced the Terch/IO system, which it described as a measurement tool for Sperry Corp. 1100 uptool for Sperry Corp. 1100 up-

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user applications faster and easier.

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#### Frunk L. Chisholm is Cullinet's Executive Vice President. Innik has worked closely with Cullinet users and prospective sees for more than six years. As a key member of Cullinet's namagement tesse, Frank has contributed heavily to Julieut's database product development strategy.

#### IDMS/R Seminar Cities and Dates

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Artesta GA	Per 15	Dance CO	Pres. 7	New Orleans, LA	Pag. 23	Secremento, CA	Pet. 21
Arthugum Heighes, IL.	Pag. 22	Der Motres, IA	Pop. 16	Mere Took, NY	Peb. 22	St. Louis, MO	Pet S
Amer. TX	Pro. 14	Detroit, MI	Pob S	Mortolle, VA	Jan. 18	Salt Laine City, UT	Pet 21
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#### 32

Digital's DR Soft/Net links micros

TUTORIAL

## Communications manager to emerge from automation

## PBX

MANAGER from page 53

#### LINK

between local and remote processors via local seasors, thereby providing full distributed processing. The product will be sold for \$1,000. Digital Research also as negarized a new compiler design, the for Fortne-77, will be released in Jeanury, the company said.

The Fortne-77, outple, priced at \$800, will be the first of five are compilers to use the technology and i'm on Concernes Cryff and Cryff will run on Concernes Cryff and Cryff.

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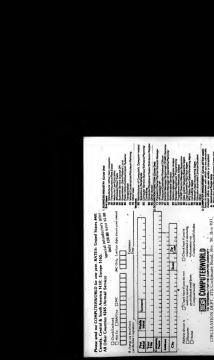
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## The rise of the technical writer

#### By Gene Knauer

By Gene Knauer
In the rush to develop systems that meet the immediate or imminent needs of amangement information systems environment, documentation of their revelves or priority. And traditionally, technical owner saff in both salary and status. But the picture has changed significantly in recent years and continues to bright-microscopies. With greater acceptance of documendevelopment, pay and responsibilities for writers are growing. In a typical development situation, the programmer builds a system along linear programmer builds a system along linear notes about a system in the order that his class come. These notes rarely consider concise system documentation but can be also the system of the control of the contr

omissions of the programmer's noise, the tech writer must synthesis and extract a clean, clear set of user instructions for the new computer system. The writer seeks to the control of th

Armed with new knowledge about systems Armed with new knowledge about systems technology and the development process, the user expects more from documentation, based on his experience with manuals from popular micro packages. Dry technical proce isn't acceptable anymore. Graphics, tutorials, floucharty, on-tine help screens and quick reference cards are part of the new generation of documentation tools.

moor narmony in the workplace mong the improvements is a gre-goverlap in the responsibilities ratems staff and writers. A variety of schemes for organ

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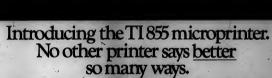
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our top-of-the-line 9508 mainterine series. We hirobused the NIOP Personal Computer specific designed for the business/professional market. It produces received the first personal computer designed with not injuried to the first personal computer designed with not injuried the first personal computer designed with not injuried the first personal computer and other computer, as online terminal to your mainterine, or networked with other NIOP personal Computers and other popular if

And 1984 will be even better.

















Very parameter is one written. In a first of the Livermore content is managing to the Livermore content is managing to the Livermore content is managing to development of such a system. "We're experimenting with a program that automatically applies the additing tasks between the nicery applies the maintrans. Global changes at facting the entire document are has ded on the maintrans. Desalte, six did ded on the maintrans. Desalte, six of the succession of the maintrans.

According to Girill, the main filthe writer is working on resides on the mainframe. Little pieces of the file are shipped, as needed, to the micro, a handy feature when editi among the 16,000 pages of on-line documentation that the center pre-

Another type of expert system the

th involves the cancept of a decine tree. According to distill, the stam is mother type of quarry recesses succhanism that accesses a neural subject or portion of decustration and then leads the user years a 'tree' with alternatives, unthe problem or user quarry is fully friend. The system such by reuting so user to that part of the documention that answers the question.

Evidence of the emergence of chaical writing as a data process g specialty is in the proliferation of riting subspecialties and in the con-

Documentation has ablished itself as one of a best liaisons between he technical and user worlds. As more users

processing, their introduction to systems will be greatly influenced by the quality of systems documentation.

There are now methods analyses who specialize in putting together translards and procedures manusal moterare (they anticipate under what names a user neight seek a lift information in a manuel, then sup the indexting and cross references), hardware and marketing a operations writers, to name just a superations writers, to name just a

of experience and an inserest in cosulting, rates currently range between \$30 and \$50 per hour. Has been an experience of the country requiring an engineering or electrical baground, may bring hourty consulting sprofessionals. But the duration of consulting assignments for the tectwriter is usually much shorter that for systems analysist and program-

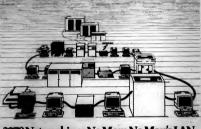
This difference may account for the steady attrition from within documentation ranks. More money and greater responsibility lure tech writers to programming, analysis

75%, according to one recest surv At a salary in the range betwee \$15,000 and \$35,000, a technical writer can take his chances as a consultant (usually as an independent or subcontractor) or become

Gearly, documentation has established itself as one of the best listsome between the technical and use worlds. As more users enter the world of data processing, their introduction to systems will be greatly infrasenced by the quality of system documentation. The clear-thinking, pragmatic, diplomatic and hard-

orking technical writer of today a look forward to a future with ultiple opportunities within MIS. About the Author

Gone Enquer is marketing reprecentative and seminar director for Enquer Computer Comulting in San Prancisco, Los Angeles and Homeluia. He writes freelance articles for d



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#### By David G. Robinson

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tools when applied aggressively at the
information systems are being used to
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#### Supporting business changes

Business and information systems m gers must first understand that infor-on systems do not produce any strate alue at all. The systems themselves a

the systems themselves, Most strategic business mo me sort of change: in busin culture, in managerial app e marketplace. It is the str anges developed by managend to perceived opportun

For the past decade, information systems organizations have been taught, often painfully, that the key to success to "serve the user." In reality, what the user wants is frequently inconsistent with the strategic direction of the corporation, especially in times of strategic change.

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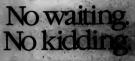
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childis, dasa access and outre, ex-termined a spectrum of opportunities for managers. The speed, cost, size and capa-bilities of the new information technology continue to improve rapidly, and there appeare to be uniformation technology continue to improve rapidly, and there appeare to be uniformation technological storage. However, in spite of this new wealth of However, in spite of this new wealth of technological advances, the ability of most businesse to assimilate and apply information schoology lag for behind many authors have noted this abortfall over the years, the effect in the 1980s of this "teraseig caps" in much more critical. Section executive an increasingly feet that efficient capacities and increasingly refer that effit from technology investment, but few

are able to articulate the impact informa-tion technology has or should have on their businesses

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will also affect the production economics in some industries by changing the industry's historical trade-off between standardization and flexibility. Some equipment manufacturing plants have already used information tacknology to achieve unit costs that remain essentially

or one million units are produced. This new potential will effectively remove many of the truditional competitive advantages in those in-

destrice.

Information technology will reduce historical economies of scale in some areas while extending them in others. Because of the mentioning, controlling and coordinates market mentical of the mention market mention.

built which will capture new economies of scale by utiliaing mechanics, space, energy and specialized labor more efficiently.

There are critical implica-

There are a received an action of the composition for fifther that composiin industries in which information technologies are changing the nature of the business. Traffitensi rules of composition will change, new scenarios of scale will will be new competition, new products and services, new classification channels and different levels of demand and elestricity. Product life cycles will be electroned, and the veloc-added stream of

Before management can consider the long-run impact information technology will have within the firm, it must understand here information acknowledge to changing the advancy. This office is onirely consistent with most fews of corporate ettening, risch bagin with an undertending of the external entreasment of the firm. At the substructure is the firm of the substructure is the substructure of notematics, between a substrucnation from under (in the making industry, for emiste) to miner (on in the ab-

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face is fine for the expanse of a desktop, but not for work on the move So with the Gavilan, we

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strategy should use information technology either directly to add unique features to the product or service or to contribute to quality, service or image through the func-

tional areas. It me may be entit from ... Although in technology spike the competition to technology application that is not consistent with its competitive strategy. It will enlarge much greater strategic benefits from an information includely application and application of its competitive strategy is critical to the selection of appropriate automation projects, because application automation projects, because application automation projects, because application automation projects, because application automation are from applications that contribute our from applications that contribute our from applications that contribute

to a differentiation strategy.

When a firm pursues a cost leader ship strategy, information technology must create or support opportunities in these same area.

interes in these same area. Information technology applications can substantially reduce costs in the functional areas of engineering, design and manufacturing. Information technology can also be used to reduce waste significantly, to improve productivity and to identify marginal customers. The firm that vigorous pursues a occi leadership strategy should identify and execute information stehnology can be considered the second control of the second control of

and advance such a strategy.

Conversely, a strategy to achieve a differentiated position in an industry has a very different set of requirements. The differentiation strategy requires a perceived unique

ogy, product fastures, custamer service, dealer networks or some other 'category. Usually, firms pursuing a differentiation strategy are most successful when they establish uniqueness in several categories. As distribution company specialising in

uniquemen in evvent energeries. Addershuiden company preciditing in periodicals differentiated tracif in service reliability, responsivement or customer needs and additional product features primarily through its computer systems. Among sationwide periodical distributes, this firm is perceived as the most ophibicated and highest quality firm in

Intermation technology can support a differentiation straingly in a variety of ways. It can contribute a superior customes service by provitory increasing the availability of the proper part with a dealer investory system. Information technology can contribute to high quality through, the use of quality control systems and through the use of computer-

ontribute to high quality through the use of quality control systems and through the use of computer, and through the use of computer, over the furnishing and improved to possibly and linguoved to possibly and the provide furnishing and marketylate represents to customer needs. In order to the provide the provided furnishing the provided and marketylates resirements. In some instances, info union technology can also provide come to markets that would obsert to be tool remote to service.

prigure 2 shows how information setechnology applications must be specifically chosen to support the generic strategy of a firm. Application supporting a low-cost generic strate of gy are designed to take advantage of



Figure 3. Applications that support firms' generic strategic

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# A case for Mumps

### By Casimiro Alonso

By Casimiro Alonae

The system buyer's dilemna is mallian"Over system buyer's dilemna is mallian"Over system buyer's dilemna is mallian"Over system buyer's dilemna is mallianunder consultant of the system buyer of cuttine for years. Ye purchasing only
entered the common four distantion along the content of the operations manager must choose
among four distantion all the content of the comparison o

ing systems have followed from main-frames to minis to superminis to micros without changing sufficiently to accom-modate many of today's interactive needs. Now, this outdated software is often a bottleneck to a true increase in total system performance.

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### IN DEPTH/A CASE FOR MUMPS

connective bid was based or providing both economical application development and an efficient run-time environment. In addition, we wanted to assure that the system we proposed was exnendable and economical

retenses. In accurron, we wanted to assure that the system we proposed wat expandable and economical over the long term, as well.

From previous experience with the litumps larguage, we were aware of its ability to improve programmer pro-

apseding up development time. We also liked the fact that Mumps provided easy portability from micros to unias to superminia. We were, therefore, inclined to go with a Mumps-based system. However, what overall effect Mumps would have or system performance and

stined to ence and system to everall from the wind system on the system of the system

functionality required data base rinning the contract was of disk or just aread

son was submitted by the different hardware vendor and each vendor was kept informed of the results of each other vendor so as to encourage each to obtain the best possible performance.

in his system.
The benchmark took the in of comparing Munips of the languages and a base systems in terms lak occupation, processpeed and lines of code

sisted of:

1. Creating a data base with the following structure:

Place:

with the following structure:
Files:
Parts file (1,000 records).
Color file (6,000 records)
containing six "color" re(8

Size file (46,000 records) containing eight "size" records per "part-color." Store file (288,000 records) containing six "store" records per "part-colorplier file (30 records). slly file (30 records).

nily file (30 records). intionablys: t-color-size-store 100 relations).

8,000 relations). Supplier-part (1,000 rela ns).

Family-part (1,000 releons).

2. Creating a data base nat gives stock and sales narts as well as stock value or family part-color-sizeore. The query implied the se of the "family-nart" and

On the data base reation test, Mumps as from half again o set to 18 times as far as the other systems, he Mumps data bas also occupied only me-half to one-fourti

of the disk space required by others. And Mumps

sistions. Two different ueries were performed: a long" one requiring access 17,650 records, and a

O records.

The chart on the cover age shows the technical pecifications of the different systems evaluated in the

Bessits on seven systems
Mumps performed much
better than the other languages on almost every cor
partion run (again, see covy
page). On the data base crestion test, for example,
Missaps was from half again
as fast to 18 times as fast a
the other systems. The
Bitunes data has also occupied only one-half to onefourth of the disk space required by others. And
Bitunes programming refully seen the service of the service of the service of the
Bitunes programming re-

of code.

In summary, in different comparisons on various ma-

chines, Humps was bested only once. A more significant fact is that a Digital Equipment Corp. PDP-11/44, running Humps, actually outper-

This data indicates that user choosing litumps nort-ware for interactive data base applications can expect to five times more power from a given computer. And this power, in turn, will elin frate many of the performance problems encountered we missioneousers in admin

In addition, the data lai



### IN DEPTH/A CASE FOR MUMPS

The system we were prepared to recommend to our customer was a DEC VAX-11/750 under VMS, running VAX-11 DSM. This recommendation was nade to allow the user to take advantage of Hump as well as gain the 32-bit capability and future growth and versatility of the VAX.



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grands insently merch in a berguoning software unity. Taiwan is making chipan bin gas on, and it will centre grow. If the flowing two and it will centre of the processor, they are going to get if not from an American manufacture, then from a foreign source. While the U.S. currently holds they also when it comes to technologies solo when it comes to technologies as technologies under wraps.

here is no guarantee it can keep hous technologies under wraps. Even if the current, outdated, U.S.-Brean if the current, outdated, U.S.-acturers from dealing with the Sci-sics are stiffende, other centres or sure to find the Soviet Union as arturanty feetile market in which to ell electronics. After all, without the Mas and DEG or the U.S. as compet-ors, selling hardware becomes a roch easier task.

# PLANNING sóm page 50

casefully from a disaster.

Gaining top-level, corpora support for a disaster recover is probably the strongest gas for success. enter recovery plan strongest guarante

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To do this, there are three basic teps that help define the overall im-act of the DP operation on the rest

pact of the DP operation on the res-or the company.

If The first step is to evaluate the thoroughly the costs and benefits of a costingacy plan. This involves in-terest the cost of the system of the cost of

plication.
This phase size includes an analysis of the risks and benefits of various recovery alternatives.

The last step involves the acts all development of a contingency plan. This plan should be develope by the DP personnel so that they ar familiar with its structure. The flast step also involves testing the contingency plan to make sure it works an critating personnel in how to cop training personnel in how to cop

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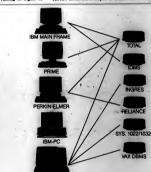
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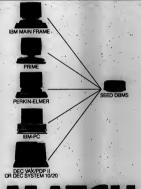
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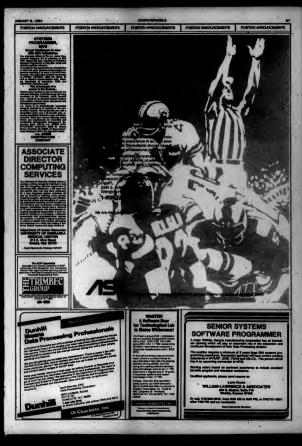
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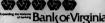
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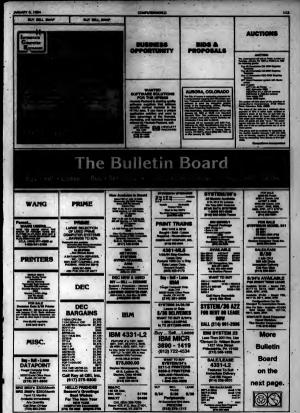
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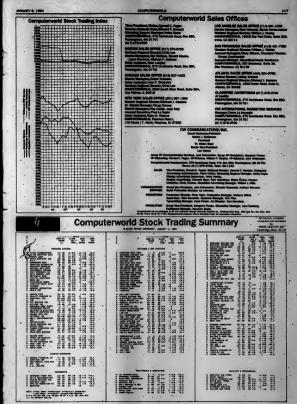


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